UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

September 27, 2010

Ms. Susan McDonald
Harrisburg Airports District Office
Federal Aviation Administration
3905 Hartzdale Avenue, Suite 508
Camphill, PA 17011

RE: Philadelphia International Airport Capacity Enhancement Program Final Environmental Impact Statement, August 2010 CEQ # 20100334

Dear Ms. McDonald:

In accordance with the National Environmental Policy Act (NEPA) of 1969 and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) offers the following comments regarding the Philadelphia International Airport (PHL) Capacity Enhancement Program (CEP) Final Environmental Impact Statement (FEIS). Based on our review of the Draft EIS, EPA rated the environmental impacts of both build alternatives in the DEIS as EC (Environmental Concerns) and the adequacy of the impact statement as 2 (Insufficient Information).

According to the FEIS, Alternative A was chosen as the preferred alternative since it meets the Purpose and Need by adding capacity and significantly reducing delay in all weather conditions in the long term; allows greater flexibility of construction phasing, or scheduling; maintains a crosswind runway; minimizes disruption of local surface transportation and does not result in construction impacts to Interstate 95; has less average annual delays during the prolonged construction period; significant environmental impacts can be avoided or minimized with mitigation. Alternative A will result in the loss of approximately 82 acres of wetlands (46.7 of these acres are within the former Philadelphia Water Department sludge lagoons and federal jurisdiction has not been determined), 23 acres of waterways, and 24.5 acres of the Delaware River and will require construction in a FEMA-mapped floodplain. It will also directly impact 534.1 acres of upland grassland (410.1 mowed and maintained and 124.0 acres of old field), and 68.6 acres of upland woodland which is located along the shoreline of the Delaware River. This alternative would also increase the amount of pavement by 122 acres. The FEIS states that environmentally there is no clear distinction between the two build alternatives but Alternative A would result in an average delay of 5.2 minutes in 2025 as compared to 19.3 minutes under the No-Action Alternative. Construction for the CEP was originally scheduled to begin in 2008 and be completed in 2020 after a 13 calendar year construction period. It is now projected that

construction would start in 2013 and be completed in 2025

Alternative A would have five runways connected by a redesigned and more efficient taxiway system. Runways 8-26, and 9R-27L (renamed) would be extended and a new runway 9R-27L would be constructed. This alternative reconfigures and upgrades the existing terminal complex and include relocation of the UPS facility and part of the USACE Fort Mifflin Dredge Disposal Facility, closure of Hog Island Road, the Sunoco Hog Island Warf would be closed and its functions replaced by extending the existing Sunoco Fort Mifflin Pier.

According the EIS minimum mitigation goals for Alternative A would include: 81.7 acres of vegetated wetland, of which 66.1 acres would be palustrine; and 15.6 acres would be riverine (freshwater tidal). Replace lost functions of state-listed endangered species habitat, flood flow alteration, sediment/toxicant retention, and fish and shellfish habitat (riverine), replace 23.1 acres of non-tidal waterways providing of state-listed endangered species habitat, flood flow alteration, sediment/toxicant retention, and fish and shellfish habitat, replace lost functions associated with approximately 24.5 acres of Delaware River intertidal and subtidal habitats. Aquatic mitigation must comply with the April 10, 2008 40 CFR Part 230 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. It should also be noted that mitigation ratios may vary depending on the type of mitigation proposed and the type of impact. The project team should work closely with state and federal agencies to develop an acceptable mitigation package to address all environmental impacts, including those to listed species and their habitats. Mitigation commitments should be documented in the Record of Decision.

EPA is also concerned about the impacts to the Delaware River. The FEIS does not provide information on the type of impact and construction methods for the work in the Delaware River. Impacts may vary depending on the construction design. NOAA's National Marine Fisheries Service documents some of these concerns in their letter to FAA dated July 26, 2010 regarding Essential Fish Habitat. According to the letter, the CEP will adversely affect the spawning success and the quality for the nursery habitat of residential anadromous fish species and thus directly, indirectly, and cumulatively, impact the EFH for bluefish by reducing the availability of prey. Temporary and permanent impacts should be avoided and minimized.

In general the DEIS and FEIS lack sufficient detail to evaluate potential impacts in several areas. EPA continues to have the following environmental concerns regarding this project. We disagree with the position stated in the EIS that Alternative A would have a minor impact on common wildlife species using these habitats, and that the loss of intertidal emergent wetlands in the project area would not result in a severe loss of this critical habitat given the close proximity and abundance of similar habitat in the John Heinz National Wildlife Refuge. Given the urban setting of the airport, aquatic habitats and habitat diversity are very important to support the flora and fauna of the area. In addition, since there are compatibility issues with wetlands being constructed in the vicinity of the airport, significant functions may be lost to the area and other habitats may be further degraded. It is very important that impacts be avoided and minimized.

Enterprise Avenue Landfill Site, which lies underneath Runway 8-26, was formerly used for the disposal of incineration residue, fly ash, and bulky debris. In 2002, the City of Philadelphia and EPA entered into an Administrative Order by Consent (AOC) that requires the

City to treat and monitor the groundwater contaminants at the Enterprise Avenue Landfill Site (Site). In 2008, this enforcement document was modified to allow the City to study the groundwater. The groundwater extraction wells were temporarily shutdown, additional monitoring wells were installed, and the City is currently monitoring the groundwater to evaluate its natural degradation. The study is expected to take a few years to complete.

EPA is concerned about the impact of the proposed action to the monitoring wells and groundwater treatment at the Site. For example, the EIS discusses that groundwater monitoring wells, installed to evaluate known releases, would be destroyed as part of the proposed construction of Alternatives A and B; unremediated releases may be inaccessible for continued monitoring and/or remediation; and the proposed alternatives would likely require the treatment system to be shut down temporarily, creating a period of time in which the release would not be actively remediated or hydraulically controlled.

Given that the evaluation and remediation of the groundwater are requirements pursuant to the AOC between the US EPA and the City, any deviation to the approved work plan and/or destruction of groundwater monitoring wells may not occur without pre-approval by EPA of a revised work plan in accordance with the terms of the AOC. Accordingly, any exacerbation or release of hazardous substances in the groundwater as a result of the airport enhancement project is subject to enforcement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Therefore, the impact on the Enterprise Avenue Landfill Site remedy and a detailed plan to address the protectiveness of the remedy must be provided.

Because of the increased loading on the landfill, the EIS states that it is likely that both Alternatives A and B would require reconstructing the landfill cap; the additional weight from the fill from both Alternatives A and B may also cause the migration of groundwater contamination from the landfill containment system; and the current remediation system will need to be modified or replaced to accommodate the added height of the ground surface. Based upon these statements, the airport enhancement project anticipates that the Enterprise Avenue Landfill Site landfill cap will be affected. The effectiveness of the cover cannot be impaired and any Site activities must take measures to preserve the effectiveness of the cover, including during any construction. A detailed plan to address the protectiveness of the remedy must be provided. Additionally, any exacerbation or release of hazardous substances in the groundwater as a result of the disturbance of the landfill cap is subject to enforcement under CERCLA. Please note that additional detailed comments are presented in the enclosed attachment.

EPA would like to again emphasize the necessity that any potential future revision to the landfill cover and groundwater system will require coordination, consultation, and approval by EPA. Renegotiation of the AOC and the Response Plan will also be necessary. This is required before any work begins on the airport enhancement project. EPA would recommend having a meeting with all involved parties to discuss the FAA and City plans to address any necessary modification or potential impact to the remedy.

In general, the air quality modeling analysis performed by FAA did not, as was previously agreed upon, utilize the requisite 5 years of meteorological data when modeling the no action and preferred alternative; FAA continues to present an analysis which is based on one conservative year and continues to decline to model either construction related or air toxic emissions that will

result from this project. And finally, the modeling that was performed did not: 1) include the effects from building downwash; 2) adequately categorize the expected increase in mobile source emissions because of the restricted spatial extent of the modeling domain; and 3) adequately estimate the $PM_{2.5}$ concentrations in the area since the methodology that was used is expected to significantly underestimate the background $PM_{2.5}$ concentrations in the project area. We will continue to work with the project team on air conformity issues.

The project team should continue to avoid and minimize environmental and community impacts and use green airport and other innovative ideas to reduce the footprint of airport impacts. The use of an environmental monitor to oversee the construction and mitigation should also be documented in the ROD. Please consider comments on Environmental Justice found in the attached detailed comments. EPA appreciates the opportunity to provide comments on the FEIS. If you have any questions regarding these comments, please contact Ms. Barbara Okorn, who can be reached at (215) 814-3330.

Sincerely,

for

Jeffrey Lapp
Director, Office of Environmental Programs

Attachment

Specific Comments:

Enterprise Avenue Landfill Site

EPA would like to reinforce the significance of the AOC with the City of Philadelphia and the consequences of any actions that could cause a release of hazardous substances. As stated in the Paragraph 8.13 of the AOC, "In the event that EPA believes that response actions or other current activities at the Site by the City are causing or may cause a release or potential release of hazardous substances, or are a threat to public health or welfare or to the environment, EPA may, at it discretion, immediately halt or modify such response actions or other activities to eliminate or mitigate such actual or potential release or threat."

Furthermore, if hazardous substances are released during any reconfiguration activities being performed by the FAA at the Enterprise Avenue Landfill Site, the FAA may be considered an "operator" under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and, may be ultimately found as a Potentially Responsible Party (PRP), which could involve paying for or performing cleanup at the Site.

Section 1.7 – Required Permits and Actions - Table 1-5: The FAA must consult with the US EPA and the City of Philadelphia before undertaking activities at the Site which will cause or may cause a release or potential release of hazardous substances, or are a threat to public health or welfare or to the environment. These activities include, but are not limited to, impairment or destruction of the landfill cap, or interfering with the on-going groundwater evaluation or causing the release or exacerbation of groundwater hazardous substances.

Section 4.18.3 - Hazardous Materials and Solid Waste - Affected Environment: Enterprise Avenue Landfill is not listed as a potential or confirmed source of subsurface contamination.

Section 5.18.2 – Hazardous Materials, Pollution Prevention and Solid Wastes – Indirect Impacts – Ongoing Release Monitoring and Remediation: As mentioned above, in 2002, the City of Philadelphia and EPA entered into an Administrative Order by Consent (AOC) that requires the City to treat and monitor the groundwater contaminants at the Enterprise Avenue Landfill Site ("Site"). However, in 2008, this enforcement document was modified to allow the City to study the groundwater. The groundwater extraction wells were temporarily shutdown, additional monitoring wells were installed, and the City is currently monitoring the groundwater to evaluate its natural degradation. The study is expected to take a few years to complete.

Section 5.18.4 – Hazardous Materials, Pollution Prevention and Solid Wastes – Summary of Impacts: Although Enterprise Avenue Landfill Site is no longer on the National Priorities List (NPL), waste has been left in place and groundwater monitoring and treatment is being performed. The proposed activities on the Enterprise Avenue Landfill Site involve destroying groundwater monitoring wells and putting additional loading on the landfill cap that may cause migration of groundwater contamination from the landfill containment system. Therefore, EPA strongly disagrees with the FAA's determination that the impacts would not be considered

significant.

Section 6.7 – Water Quality: Although mentioned in the response to Comment F-001-041, Section 6.7 of the EIS does not describe mitigation efforts to address potential significant impacts as a result of enhancement activities occurring on the Enterprise Landfill to water quality.

Section 3.4.2 – Screening Level 2 – Screening of Preliminary Alternatives – Alternative A: Parallel Runway 8-26 East – Project Costs Relative to Benefits: Although it is noted on p. 3-42 that the cost of environmental mitigation requirements is unknown, this is a problem. Along with a paucity of detail regarding how the Enterprise Avenue Landfill Site cap will be replaced, how long it will take to alter the runway (and tentatively when) and information about abandoning/installing monitoring wells; monitoring plans and sampling, there is little information regarding how much these items will cost.

Section 5.11.3 – Water Quality – Direct Impacts – Changes in Hydrology: Would the Mingo Creek pumping station be affected by any of the alternatives?

Section 5.11.3 – Water Quality – Direct Impacts – Alternative A – Groundwater Impacts:
a. Glycol may not have a Pennsylvania Act 2 (PA Act 2) standard but there may be a Risk-Based Concentration (RBC) which could be applicable to the Site. This should be discussed with EPA Superfund Program.
b. A monitoring plan is needed to make sure glycol does not impact the sole source aquifer (SSA) or other sensitive areas and to address how glycol may affect Enterprise Avenue Landfill Site.
c. It is not clear how the seepage will be collected, treated, and discharged. The treatment standards should be noted.

Section 5.11.5 – Water Quality – Temporary (Construction) Impacts: With respect to dewatering noted for Alternatives A and B on pages 5-167 to 5-168, it is not clear how this would affect the Enterprise Avenue Landfill Site. Since iron is an issue, perhaps its treatment should be discussed if there is any modification to the remediation.

Section 5.11.8 – Water Quality – Summary: Same comments as "Groundwater Impacts" p. 5-164 (EPA Comment 8); ditto for Table 5.11-6: "no impact to SSA recharge or quality" is not necessarily true.

Section 5.18.1 – Hazardous Materials, Pollution Prevention and Solid Wastes – Direct Impacts – Alternatives A and B: Fill standards should be discussed with EPA's Superfund Program.

Table 5.21-1 – Summary Comparison of the Environmental Consequences of the Alternatives in 2030: The appropriate regulations should be noted under "Hazardous Materials and Solid Wastes" not just that "all regulations will be followed."

Section 6.7.2 – Water Quality – Minimization and Mitigation: Contaminated Water Discharge-Why were PA Act 2 standards selected; how does the protection compare to other

standards?

Section 6.7.2 – Water Quality – Minimization and Mitigation – Aircraft Facilities and Operations: See previous comments re: glycol ; is there a spill plan for petroleum?

The project team should coordinate with the Federal Emergency Management (FEMA) regarding the placement of fill and design of the proposed runway (9R), and the control discharge to the river through outfalls and tide gates.

Sole Source Aquifer

Section 4.11.3 Groundwater: The penultimate sentence of the first paragraph regarding the designated sole source aquifer area is incorrect and misleading. The sentence should be amended to read: "The Airport is not directly over the aquifer, but is within the designated Sole Source Aquifer review area, which includes the portion of the Delaware River basin within two miles of the Delaware River."

Section 4.11.3 Groundwater Flow: The final sentence of the final paragraph is misleading and should be amended. The airport is not south of the designated sole source aquifer area; the airport is directly over and within the designated review area.

Section 5.11.3 Alternative A Groundwater Impacts: EPA's sole source aquifer program should be consulted early in the design process of the ground water seepage collection and treatment system for the APM tunnel constructed below the water table.

Section 5.11.4 Indirect Impacts Relocation of Dredge Disposal Facility: EPA's sole source aquifer program should be consulted early in the design process regarding use of a portion of the dredge disposal facility. Again, we recommend the use of an impervious liner to minimize the infiltration and potential transportation of contaminants to ground water.

Section 5.11.5 Temporary Construction Impacts: Similar to previous construction projects at the airport, care should be taken when conducting temporary dewatering activities of the surficial aquifer for foundation excavations and trenches. All dewatering activities shall be done in a manner that avoids adverse impact to ground water quality. Furthermore, the pumping water level in the dewatering well(s) should be maintained at the minimum possible depth below the ground surface that will dewater the excavation. The dewatering pumping duration should be limited to the period actually needed to dewater the excavation effectively.

The fuel storage tanks should be equipped with adequate lightning suppression devices and the fuel farm should be surrounded by a protective and opaque fence.

Air Quality

The response to the DEIS comment F-001-045 does not adequately address our comment. FAA indicates that since it was determined that 2005 was the "worst case" year of meteorology of the 5 year period from 2001 through 2008 that all alternatives need only consider impacts using the 2005 year of meteorology. As indicated in our original comment this was not the

agreement that was reached between FAA and EPA. The agreement was that once FAA determined its preferred alternative that it would evaluate both the No Build and Preferred Alternative with a full 5 year meteorological record.

We continue to have concerns with the responses to F-001-046 & 047. FAA has indicated that "... It is FAA's present policy and guidance to address HAP's in the form of emissions inventories ..." We recognize that FAA's guidance documents does not address the dispersion modeling of air toxics stating that "...scientific knowledge of these analyses with respect to airports is still very limited[1]." However, it is our firm belief that if an emissions inventory of air toxics can be determined that there should not be any reason to avoid taking the next step and determining the ambient impacts from such emissions. As stated in our original comment there is ample reason to indicate that the state-of-the-science has achieved a level to allow one to reasonably estimate air toxics impacts.

We disagree with the response to F-001-048. FAA states in its response to this comment that "... building downwash on the plumes from stationary sources (such as the utility plant) were not accounted for in the dispersion modeling." The response indicates that this was not done because the impacts from such sources are "minor." The only justifiable reason for not considering a quantifiable effect on pollutant dispersion, such as building downwash, is if it can be shown that to not account for the effect would result in a conservative (i.e., higher than expected) estimate. This is certainly not the case for stationary source emissions that are affected by building downwash.

The response to comment F-001-049 does not fully address our original comment. FAA states that "... The assessment of "gridded" receptors ... has been accomplished ... findings will be provided in the FEIS." This information is actually found in Attachment 2 of Appendix H of the Final Air Quality Technical Report, which has been provided. The analysis is significantly lacking. Although both a course grid (500m resolution) was modeled and then at course receptor points where high concentrations were predicted a fine grid (50m resolution) was modeled, the course grid excluded the discrete receptor area. That is, no fine grid modeling was performed around any discrete receptors. Therefore, since many of the highest concentrations were predicted at the discrete receptors and no fine scale modeling was performed at those locations the analysis performed did not adequately respond to our original comment. The analysis did not resolve the concentration gradients in the vicinity of many of the highest predicted concentrations.

The response to F-001-050 does not address our concern. FAA states in its response to this comment that "The assessment of construction-related emission has been conducted in the form of an emissions inventory ..." The point on my original comment was that the construction of an emissions inventory does not constitute an adequate assessment. Construction-related emissions should be modeled along with the other sources.

Sufficient information has not been provided in the response to F-001-051 to address our comment. FAA states in its response to this comment that "The regional study area ... is considered to be sufficiently large enough the capture the vast majority of mobile source

---

[1] *Guidance for Quantifying Speciated Organic Gas Emissions from Airport Source, FAA, 9/02/09*

emissions ..." There does not appear to have been any analysis performed which would lead FAA to this conclusion; therefore, our original concern remains.

We continue to disagree with the responses to F-001-052 & 053. FAA states in its response to this comment that "... the focus of the modeling is on airport-related emission sources ... other stationary sources ... are not expected to be effected by the CEP project ... Therefore, these sources are assumed to be adequately covered by the "background" PM2.5 values ..." Although the CEP sources are the principle focus of the analysis, the EIS does include an analysis this designed to estimate the expected total $PM_{2.5}$ concentrations in the area. By adding the maximum $PM_{2.5}$ concentrations that have been measured in the area to the modeled $PM_{2.5}$ concentrations from the CEP sources is not, as is implied in FAA's response, a conservative estimate. Rather, because of the close proximity of the utility plant and oil refineries, the methodology used is likely to significantly underestimate the combined $PM_{2.5}$ concentrations in the area. As indicated in my original comment FAA should, in addition to the CEP sources, model all "near-by" sources.

The project team should quantify greenhouse gas (GHG) emissions resulting from the construction and operations and consider the use of techniques to reduce GHG emissions and/or to provide a sink for CO2. The use of hydraulic, electrical and hybrid vehicles should be considered.

Environmental Justice

The following paragraph appears in Chapter Four of the document, "The concept of race is separate from the concept of Hispanic origin. The U.S. Census directs users of the U.S. Census data to avoid combining race categories with Hispanic. The U.S. Census collects separate data on Hispanic populations in addition to data on minority populations. All minority populations in the study area were considered, and a Hispanic population was identified in the immediate vicinity of the Airport. Therefore, although not required by Executive Order 12898, this analysis addresses minority and Hispanic populations separately."

This language should be modified, since the Executive does call for analyses of minority and low-income populations. The Executive Order 12898 refers to minority populations and low-income populations. Its intent was to include assessment of all minority populations including Hispanic populations. Since an assessment was in fact conducted for Hispanic Populations, the assessment does in fact address the concern. There is considerable debate over the methods used to assess minority populations in these assessments. Some argue that all minority populations should be combined into a single assessment. Others argue, as is the case here that Hispanic populations be handled separately for the reasons stated in this document. It seems reasonable that any assessment should contain a mechanism for conducting and meaningful, objective assessment of the minority populations. This assessment must be conducting in an objective scientifically defensible, logical, and fair manner that provides meaningful information that can be used to identify at-risk populations located in close proximity to the area under study. This reasoning is the guiding force behind the Executive Order, and any and all assessment designed to address those driving principles is in effect following the intent of Executive Order 12898. Further, it is important that any assessment scheme devised provide the maximum protection for any and all populations under consideration. It is most important that the assessment

methodology be designed to assure that it does in fact appropriately identify the at-risk populations in the area. This reviewer can not determine if the methodology selected is more protective of the Hispanic populations in the study area than any other type of assessment since no other scheme was provided for comparison. It is the hope of this reviewer that such assessments were made in advance of the preparation of this document, and that the scheme presented is appropriately objective and protective.

In addition to figure 4.5.1, it would be most helpful to have figures to show the populations of Environmental Justice concern in juxtaposition to area impacts as a means of assessment cumulative or multiple impacts upon the populations of Environmental Justice concern. Identification of areas of Environmental Justice concern is meaningless, if we do not consider the potential impacts on those populations. Please note the wording of the Executive Order, "To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands." Some effort should be made to relate the location of the areas of potential Environmental Justice concern to areas of potential adverse impact. Where are the floodplains in association to the areas of potential EJ concern? Where are the noise impacts in relation to the areas of potential EJ concern? Where are the construction activities that may produce fugitive dusts in relation to the areas of potential EJ concern? Are there multiple impacts that may take place in relation to the areas of potential EJ concern?

Section 5.5.4 Impact Assessment, is described in the document as follows: "This section identifies and explains whether environmental justice populations exist within the area of potential significant impacts and then assesses if these populations would experience disproportionately high and adverse impacts." The discussion in this section seems to focus on the issue of disproportionate impacts, but does not address those that are adverse. Are there potentially adverse impacts? If so, where are they localized? What are they?

The following paragraph states, "The City of Philadelphia owns a community garden east of the Airport near the Philadelphia Water District lagoons. The City intends to relocate the community gardens prior to the commencement of construction of the CEP. This change in land use is part of the No-Action Alternative because the City has been trying to relocate the gardens for a number of years. Because this land would not be in use as a community garden at the time of the CEP acquisition and construction, there is no potential for the acquisition of this land to affect an environmental justice community." Is it not reasonable to assume that any activities that take place on this land will have an impact upon the community? What is going to take place as a part of the CEP? Will there be construction? Will there be truck traffic? Will there be noise? Will there be fugitive dusts?